

## Product datasheet for **RG222716**

### **MTGR1 (CBFA2T2) (NM\_005093) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MTGR1 (CBFA2T2) (NM_005093) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTGR1
Synonyms:	EHT; MTGR1; p85; ZMYND3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG222716 representing NM\_005093  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTAAAGAATCTGGAATAAGCTTGAAGAATAACAGGTCCTGGCAAGCAATGGAAAGTTGGTCTG  
 AGAAAAGGGTGCCAGCGATGCCTGGATCGCCTGTGGAAGTGAAGATACAGTCCAGATCCTCACCTCCAC  
 CATGCCACCCCTCCACCAATAAATCCTGGAGGACCGAGGCCAGTGTCTTCACTCCTACTGCATTAAGC  
 AATGGCATCAACCATTCTCCTCCTACCCTGAATGGTGCCCATCACCGCCACAGAGATTCAGCAATGGTC  
 CTGCCCTCCACATCATCTGCACTCACAAATCAGCAATTGCCAGCCACTTGTGGTCTCGACAACCTCAG  
 CAAGTTGAAACGCTTTCTTACCCTCTGCAACAGTTTGGCAATGACATCTCCCCTGAGATTGGGGAGAAG  
 GTGCGGACTCTTGTCTTGCCTGGTGAACCAACAGTGAACAATTGAGGAATCCACTGTAAGCTCCAAG  
 AAGCCACAAACTTCCCCTTCGCTCTTTGTGATTCCATTTCTCAAGGCCAACCTGCCCTGCTGCAGCG  
 GGAAGTCTGCACTGCGCTCGGGCGGCCAAGCAGACCCCATCCCAGTACCTGGCTCAGCAGCAACACCTT  
 CTGCTCAACACAAGCATTGCATCGCTGCTGACTCGTCAGAGTTGCTCATGGAGGTGCACGAAATGGGA  
 AGAGGCCAGTCCAGAGAGGAGAGAAGAGAATAGTTTTGATAGAGACACAATTGCTCCTGAGCCTCCTGC  
 CAAGAGAGTATGTACCATCAGCCCTGCTCCTCGGCACAGTCTGCTCCTCACTGTGCCCTCATGAATCCC  
 GGGGGCAATTCCATCCTACCCCTCCACCTCTTACGATTACACCTTAGAGGATATTGCAACTTCTCACC  
 TGTATCGGAACCAACAAGATGCTAGAGCATCGAGAAGTTCTGTGATAGACACCACAGTCTTGGTCTAAA  
 TGGAGGCTATCAAGATGAGTTGGTAGATCATCGTTTGACAGAAAGGGAATGGGCTGATGAATGAAAACAT  
 CTTGACCATGCGCTGAATTGCATTATGGAATGGTAGAGAAAACAAGCGCTCTATGGCAGTTCTGCGGC  
 GCTGTCAAGAAATCAGATCGTGAAGAATCAACTACTGAAAAGACGGTACAATGAAAACACAGAGCTGAG  
 GAAAACGGGACCGAGTTGGTCTCCAGGCAGCACAGCCCTGGGAGTGCAGATTCTCTCAGCAATGATTCT  
 CAGAGAGAGTTCAACAGCAGGCCAGGTACAGGATACGTACCTGTGGAGTTTTGGAAAAAACAGAAGAAG  
 CTGTGAATAAGGTGAAAATTAGGCCATGTGAGAAGTACAGAAGGCCGCTGCTGAGGCAGAGCAGAAAGC  
 CTTTGAAGTGATTGCAACAGAGAGAGCAGCAATGGAGCAAACCATAGCGGATGTCAAGCGGCAGGCCGCA  
 GAGGATGCTTTCCTCGTCATCAATGAGCAAGAGGAGTCCACGGAGAAGTCTGGAAGTGTGGCCGAAAG  
 CCAGCGAGACATGCAGTGGTGAATATCGCGGATACTGTGGCTCTTCTGCCAGCACAAGGACTGGGA  
 GCGGCACCACCGCTCTGTGGTCAAGCCTGCATGGCCAGAGCCCCACGGCCAGGGCCGCGCTGCTT  
 CCTGTAGCGAGGGCTCCTCTGCCAGGTCGCGGACTGCAGCGTGCAGCCAGCCAGCCCTCGACAAGACCT  
 CGCAACCCACATCGCGTTCTCAACACCTGCTTCTGTGACAGCTATCGACACCAACGGACTC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG222716 representing NM\_005093  
 Red=Cloning site Green=Tags(s)

MAKESGISLKEIQVLARQWKVGPVKRVPAMPGPSVEVKIQSRSSPPTMPPLPPINPGPRPVSFPTALS  
 NGINHSPPTLNGAPSPQRF SNGPASSTSSAL TNQQLPATCGARQLSKLKRFL TLLQQFGNDISPEIGEK  
 VRTLVLALVNSTVTIEEFHCKLQEATNFPLRPFVIPFLKANLPLLQRELLHCARAAKQTPSQYLAQHEHL  
 LLNTSIASPADSSELLMEVHNGKRPSPERREENSFDRDTIAPEPPAKRVCTISPAPRHSPAL TVPLMNP  
 GGQFHPTPPPLQHYTLIEDIATSHLYREPKNMLEHREVRDRHSLGLNGGYQDELVDHRLTEREWADEWKH  
 LDHALNCIMEMVEKTRRSMAVLRRQESDREELNYWKRRYNENTELRKTGTTEL VSRQHSPGSADSL SNDS  
 QREFNSRPGTGYVPVEFWKKTTEEAVNKVKIQAMSEVQKAVAEAEQKAFEVIATERARMEQT IADVQRQAA  
 EDAFLVINEQEESTENCWNCGRKASETCSGCNIARYCGSFCQHKDWERHHRLCGQNLHGQSPHGQGRPLL  
 PVGRGSSARSADCSVSPALDKTSATTSRSSTPASVTAIDTNGL

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_005093

**ORF Size:** 1812 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_005093.3](#)

**RefSeq Size:** 6920 bp

**RefSeq ORF:** 1815 bp

**Locus ID:** 9139

**UniProt ID:** [O43439](#)

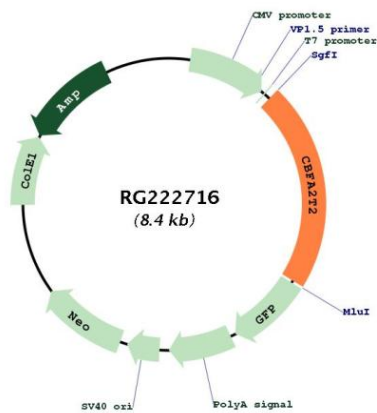
**Cytogenetics:** 20q11.21-q11.22

**Domains:** zf-MYND, TAFH

**Protein Families:** Transcription Factors

**Gene Summary:** In acute myeloid leukemia, especially in the M2 subtype, the t(8;21)(q22;q22) translocation is one of the most frequent karyotypic abnormalities. The translocation produces a chimeric gene made up of the 5'-region of the RUNX1 (AML1) gene fused to the 3'-region of the CBFA2T1 (MTG8) gene. The chimeric protein is thought to associate with the nuclear corepressor/histone deacetylase complex to block hematopoietic differentiation. The protein encoded by this gene binds to the AML1-MTG8 complex and may be important in promoting leukemogenesis. Several transcript variants are thought to exist for this gene, but the full-length natures of only three have been described. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG222716